

REMARKS

The Office Action mailed August 2, 2006 has been reviewed and, in view of the above amendments and following remarks, reconsideration and allowance of the application are respectfully requested.

I. Discussion of Objection to Drawings

The Office Action objects to the drawings as not showing every feature of the invention specified in the claims. Based upon the claims, as amended, the Applicant respectfully submits that the drawings now show every feature of the claimed invention.

II. Discussion of Information Disclosure Statement

The Office Action indicates that the Information Disclosure Statement filed August 3, 2006 is illegible. Based upon a review of the Information Disclosure Statement, as contained in the U.S. Patent and Trademark Office PAIR System, the Applicant respectfully submits that the Information Disclosure Statement is legible and respectfully requests that the Examiner consider the references referred to therein. If the Examiner should continue to maintain that the Information Disclosure Statement is illegible, then the Applicant respectfully requests that the Examiner specifically point out those portions of the Information Disclosure Statement that are illegible.

III. Claims Summary

Claims 38-72 are currently pending in the application, with claims 38, 51, 61 and 72 being independent claims. Claims 13-19, 21-23 are cancelled and claims 38-72 are added, in accordance with the above amendments. The following claim rejections were submitted by the Examiner in the outstanding Office Action:

- Claims 13-14, 16-19, and 21-22 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 4,748,790 to Frangolacci;
- Claim 13 is rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 4,351, 558 to Mueller;
- Claim 15 is rejected under 35 U.S.C. §103(a) as being unpatentable over a combination of Mueller and U.S. Patent Number 4,309,055 to Law; and

- Claim 23 is rejected under 35 U.S.C. §103(a) as being unpatentable over a combination of Mueller and U.S. Patent Number 5,220,127 to Tiomkin, et al.

The Office Action also objects to the use of “copula” in claim 23 and rejects claim 15 under 35 U.S.C. §112, second paragraph, as being indefinite. The Applicant respectfully submits that new claims 38-69 overcome each of these rejections and objections.

IV. Discussion of Claims 38-49

Independent claim 38 recites a modular structure having a frame and a shell. The frame is formed from a plurality of frame portions, and the shell is formed from a plurality of abutting armored panels. Each of the frame portions are secured to at least one of the panels to form discrete units. The units are joinable to form the modular structure, and the units are separable to disassemble the modular structure.

Frangolacci

Frangolacci discloses a structure having various cross-bars 11 that enframe a floor 12 and a ceiling 13, and the structure has various posts 14 that enframe vertical sides 15. The sides 15 are formed from various internal panels (see reference numerals 130 and 150) and various outer panels (see reference numerals 155-157), with an air space between the internal panels and outer panels. Whereas the internal panels may be formed from “two aluminum layers and a layer of polyurethane foam” (Frangolacci, column 3, lines 36-37), the outer panels are armored to “confer excellent resistance in ballistics, i.e., against all projectiles striking against the shelter violently” (Frangolacci, column 4, lines 15-17).

The outer panels of Frangolacci, in contrast with independent claim 38, do not have an abutting configuration. More particularly, the outer panels are not disclosed as being both abutting and armored. With reference to Figure 1 of Frangolacci, for example, posts 14 and tee struts 193 are depicted as extending between and separating edges of the outer panels. Accordingly, Frangolacci does not teach or suggest a configuration wherein armored panels abut, as recited by independent claim 38.

Moreover, Frangolacci effectively teaches away from the abutting configuration recited by independent claim 38. According to Frangolacci, “Each of the seals 192 is flat and clamped in between the outer sides of an external panel and a first flange of a T-section aluminum cover-

plate, known as Tee grip 193.... In the first flange of the Tee are made grooves in which elastomeric seals 194, such as neoprene seals, can be inserted. The seals 194 are applied against flat seal 192 so as to improve the tight sealing” (Frangolacci, column 4, lines 35-48). Frangolacci teaches, therefore, a configuration wherein seals are extend around the outer sides (i.e., edges) of the external panels to improve sealing of the structure. That is, grips 193 and seals 192 extend between edges of the outer panels for purposes of sealing, a structure which is contrary to the abutting configuration recited by independent claim 38.

Frangolacci also teaches that various elements of the structure are welded together. In contrast, independent claim 38 recites that the units (i.e., combination of a frame portion and panel) are joinable and are separable to disassemble the modular structure. The welding between components of the structure in Frangolacci permanently joins the components. Such permanent attachment effectively prevents portions of the structure from being considered separable. More particularly, Frangolacci teaches the formation of “seam weld beads such as bead 142” (Frangolacci, column 3, line 48), “mechanically and electrically connected by welded internal cladding sections 18” (Frangolacci, column 3, lines 53-54), internal panels 130, 150 are welded” (Frangolacci, column 4, line 32), “welded to frame 31” (Frangolacci, column 6, line 17), and “welds are made on the aluminum frame 31” (Frangolacci, column 6, line 47). Accordingly, Frangolacci teaches welding portions of the structure, including the frame. In contrast with the recitation of independent claim 38, therefore, the disclosure of Frangolacci has a welded configuration that effectively prevents portions of the structure from being separable.

Mueller

Mueller discloses a construction for an armored truck body, which includes a plurality of armor plates 22 that are connected together with various fastening members 24, 26, and 28. With reference to Figures 3, 4, and 5 of Mueller, fastening members 24, 26, and 28 are disclosed as having various slots that receive plates 22, and fastening members 24, 26, and 28 are disclosed as extending between and separating plates 22 in Figure 6. In contrast, independent claim 38 recites that the panels abut. That is, Mueller teaches that fastening members 24, 26, and 28 extend between plates 22, whereas independent claim 38 recites abutting panels.

Law and Tiomkin

The Office Action combines Mueller and Law to purportedly demonstrate that seats within a structure are known. However, neither Mueller nor Law, alone or in combination, teach or suggest seats that are floor mounted helicopter seats with a four point harness. Similarly, the Office Action combines Mueller and Tiomkin to purportedly demonstrate that a hatch assembly to which a weapon can be mounted is known. Neither Mueller nor Tiomkin, alone or in combination, teach or suggest an attachment area for mounting weaponry, as recited in claim 48, or a crane, as recited in claim 49. Further, neither Law nor Tiomkin teach or suggest a shell with abutting panels. Accordingly, neither Law nor Tiomkin, remedy the deficiencies of Frangolacci and Mueller discussed above.

Based upon the above discussion, the Applicant respectfully submits that independent claim 38 is allowable over each of Frangolacci, Mueller, Tiomkin, Law, and combinations thereof. Claims 39-49 should also be allowable over these references for at least the same reasons.

V. Discussion of Claims 50-51

Claim 50, which depends from independent claim 38, recites that the shell defines at least a portion of both an interior surface and an opposite exterior surface of the modular structure, and the frame is positioned adjacent one of the interior surface and the exterior surface of the modular structure.

As discussed above with regard to independent claim 38, both Frangolacci and Mueller disclose a configuration wherein the frame is positioned between edges of the panels. In this position, the frame is positioned either (a) between each of the interior surface and the exterior surface or (b) adjacent both of the interior surface and the exterior surface. In contrast with claim 50, however, neither Frangolacci nor Mueller teach or suggest a configuration wherein the frame is positioned adjacent one of the interior surface and the exterior surface.

Claim 51, which also depends from independent claim 38, recites that the units define a ceiling, a floor, and walls of the modular structure from the frame portions and the armored panels. According to Frangolacci, “The floor 12 consists of a rectangular sandwich type panel formed of a polyurethane foam core 124...and by two aluminum layers 121 and 122...[to provide] perfect sealing in view of electrical continuity...” (Frangolacci, column 3, lines 7-15). Rather than providing armored properties, the materials of the floor are selected to impart

electrical shielding. Mueller discloses a configuration wherein armored plates 22 are secured to floor 44 of a truck (see Mueller, column 3, lines 1-13). Accordingly, neither Frangolacci nor Mueller disclose a configuration wherein both frame portions and armored panels form a floor of a structure, as recited by claim 50.

VI. Discussion of Claims 52-61

Independent claim 52 recites a modular structure that includes a frame and a shell. The frame is formed from a plurality of frame portions, and the shell is formed from a plurality of abutting armored panels. The frame and shell form an elongate shape with a first end area and an opposite second end area. Each of the frame portions is secured to at least one of the panels to form discrete units. The units are joinable to form the modular structure, and the units are separable to disassemble the modular structure. At least one of the units has a hinged configuration to form an entry point of the modular structure. The entry point forms an opening in the modular structure that encompasses substantially all of the first end area.

Frangolacci discloses a shelter with various doors (see reference numerals 25 and 25e in Figure 1) in walls of the shelter. Referring to Figure 1, the doors extend less than half of a distance between sides of the shelter. In contrast with independent claim 52, therefore, Frangolacci does not disclose a configuration wherein an entry point forms an opening in the structure that encompasses substantially all of an end area. Mueller discloses a door 22 in a rear area of the construction. Based upon the configuration represented in Figure 2 of Mueller, the door extends through only a portion of a width and height of the rear area. Accordingly, Mueller also does not disclose a configuration wherein an entry point forms an opening in the structure that encompasses substantially all of an end area.

Claim 52 also recites that the armored panels abut each other. Accordingly, claim 52 should be allowable for at least the reasons discussed above for independent claim 38.

The Office Action combines Mueller and Law to purportedly demonstrate that seats within a structure are known. Similarly, the Office Action combines Mueller and Tiomkin to purportedly demonstrate that a hatch assembly to which a weapon can be mounted is known. Even if the combination of Law or Tiomkin with Mueller or Frangolacci is viewed as proper, neither Law nor Tiomkin, teach or suggest a shell formed from a plurality of abutting armored

panels. Accordingly, Applicants assert that the addition of Law and Tiomkin fails to cure the deficiencies of Frangolacci and Mueller discussed above.

Based upon the above discussion, the Applicant respectfully submits that independent claim 52 should be allowable over each of Frangolacci, Mueller, Tiomkin, Law, and combinations thereof. Claims 53-61 should also be allowable over these references for at least the same reasons.

VII. Discussion of Claims 62-71

Independent claim 62 recites a modular structure having an elongate shape with a first end area, an opposite second end area, and a central area located between the first end area and the second end area. The modular structure includes a frame and a shell. The frame is formed from a plurality of frame portions, and the shell is formed from a plurality of armored panels. Each of the frame portions are secured to at least one of the panels to form discrete units. The units are joinable to form the modular structure, and the units are separable to disassemble the modular structure. At least one of the units is located in the central area and has a configuration that extends entirely around the central area to define a portion of a ceiling, a floor, and walls of the modular structure.

As discussed with respect to independent claim 52, neither Frangolacci nor Mueller disclose a configuration wherein both frame portions and armored panels form a floor of a structure. In contrast, independent claim 62 recites that units are formed from frame portions and armored panels, and at least one of the units extends entirely around the central area to define a portion of the floor. Accordingly, independent claim 62 recites a configuration wherein a portion of the floor includes both a frame portion and an armored panel.

In addition, independent claim 62 recites a configuration wherein a discrete unit *extends entirely around* the central area to define a portion of a ceiling, a floor, and walls of the modular structure. In Frangolacci, the walls, ceiling, and floor are made from separate components that are subsequently joined, with no disclosure relating to at least one unit that extends entirely around a central area. Similarly, Mueller discloses walls and a ceiling made from separate components, with no part of the structure forming a floor.

Claim 69 further recites that the armored panels abut each other. Accordingly, claim 69 should be allowable for at least the reasons discussed above for independent claim 38.

The Office Action combines Mueller and Law to purportedly demonstrate that seats within a structure are known. Similarly, the Office Action combines Mueller and Tiomkin to purportedly demonstrate that a hatch assembly to which a weapon can be mounted is known. Even if the combination of Law or Tiomkin and Mueller were deemed proper, neither Law nor Tiomkin teach or suggest one of the units having a configuration that extends entirely around the central area to define a portion of a ceiling, a floor, and walls of the modular structure. Accordingly, Applicants respectfully assert that the addition of Law and Tiomkin fails to cure the deficiencies of Mueller and Frangolacci discussed above.

Based upon the above discussion, the Applicant respectfully submits that independent claim 62 and claim 69 should be allowable over each of Frangolacci, Mueller, Tiomkin, Law, and combinations thereof. Claims 63-68 and 70-71 should also be allowable over these references for at least the same reasons.

VIII. Discussion of Claim 72

Independent claim 72 recites, among other features, a modular structure, comprising a base; at least three armored sides, connected to the base and substantially perpendicular to the base; an open end including a means for coupling, wherein the means for coupling mates with a corresponding portion of a means for coupling on a second modular structure; and wherein the base, the at least three armored sides and the open end form a self-supporting structure.

Neither Mueller nor Frangolacci teach or suggest the features recited in claim 72. Instead, Mueller describes fasteners and the process and techniques for applying armor panels to trucks and other vehicles. The armor panels of Mueller are attached directly to a truck, they can not be used independently of the truck. Applying armor panels to a truck does not constitute forming a self-supporting structure. Further, Mueller clearly fails to teach or suggest an open end including a coupling arrangement wherein the coupling arrangement mates with a corresponding portion of a coupling arrangement on a second modular structure.

Frangolacci describes a shelter including walls having an internal panel and an external armoring panel (Frangolacci, Abstract). Frangolacci fails to teach or suggest a structure in which a wall forms a portion of both an interior surface and an exterior surface. In fact, Frangolacci teaches away from such an arrangement. Frangolacci describes an arrangement in which energy absorbing means are used to keep the external panel floating between the internal panel and

frame to absorb an energy produced by a blast.

The addition of Law and Tiomkin fail to cure the deficiencies of Mueller and Frangolacci with respect to claim 72. Accordingly, Applicants respectfully assert that claim 71 is allowable over the cited references.

IX. Conclusion

In view of the foregoing, the Applicant respectfully submits that all claims are in a condition for allowance. The Applicant respectfully requests, therefore, that the rejections be withdrawn and that this application now be allowed.

Should fees be deemed necessary for consideration of this Amendment, such fees are hereby requested and the Commissioner is authorized to charge deposit account number 19-0733 for payment. If anything further is desirable to place the application in even better form for allowance, the Examiner is respectfully requested to telephone the undersigned representative at (202) 824-3000

Respectfully submitted,

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